```
zm_roots.  Function         1 Root      1 =
     -2.0634576702827273394710217534643849357 93M+1 - 3.4246225668717590760883769599016964131 39M+1 i
zm_roots.  Function         1 Root      2 =
     -2.0634576702827273394710217534643849357 93M+1 + 3.4246225668717590760883769599016964131 39M+1 i
zm_roots.  Function         1 Root      3 =
      3.0560607409168638371404266945457157119 36M+1 + 8.3360535265719519314324122388720693426 83M+1 i
zm_roots.  Function         1 Root      4 =
      3.0560607409168638371404266945457157119 36M+1 - 8.3360535265719519314324122388720693426 83M+1 i
zm_roots.  Function         1 Root      5 =
      1.7330442220159610719270873353804382571 28M+1 + 1.8966588426867110268688624168470187246 28M+2 i
zm_roots.  Function         1 Root      6 =
      1.7330442220159610719270873353804382571 28M+1 - 1.8966588426867110268688624168470187246 28M+2 i
zm_roots.  Function         1 Root      7 =
      1.9175061344713172074942659830756856722 40M+2 - 2.7021620666887159677960256676968202707 95M+0 i
zm_roots.  Function         1 Root      8 =
      1.9175061344713172074942659830756856722 40M+2 + 2.7021620666887159677960256676968202707 95M+0 i
zm_roots.  Function         1 Root      9 =
     -6.7830167103210759594384380205392427940 89M+1 + 7.4625338768464899498098978613853439532 74M+1 i
zm_roots.  Function         1 Root     10 =
     -6.7830167103210759594384380205392427940 89M+1 - 7.4625338768464899498098978613853439532 74M+1 i
zm_roots.  Function         1 Root     11 =
     -1.2913580125068133311477190746099962015 02M+2 + 6.6723661534895156934080954546229953520 48M+1 i
zm_roots.  Function         1 Root     12 =
     -1.2913580125068133311477190746099962015 02M+2 - 6.6723661534895156934080954546229953520 48M+1 i
zm_roots.  Function         1 Root     13 =
      1.4639184803147017290945197046216071501 95M+2 + 1.1479407708674159918032678699526638007 24M+2 i
zm_roots.  Function         1 Root     14 =
      1.4639184803147017290945197046216071501 95M+2 - 1.1479407708674159918032678699526638007 24M+2 i
zm_roots.  Function         1 Root     15 =
      5.5392870552627630522166735012175728929 75M+1 - 1.4817784829452633331506471117190421741 57M+2 i
zm_roots.  Function         1 Root     16 =
      5.5392870552627630522166735012175728929 75M+1 + 1.4817784829452633331506471117190421741 57M+2 i
zm_roots.  Function         1 Root     17 =
     -2.8986963045264680735227321955195674785 80M+2 + 0.0000000000000000000000000000000000000 00M 0 i
zm_roots.  Function         1 Root     18 =
     -6.6076195287368780390094163614650087925 34M+1 + 2.2134032399448650843093588625372811362 71M+2 i
zm_roots.  Function         1 Root     19 =
     -6.6076195287368780390094163614650087925 34M+1 - 2.2134032399448650843093588625372811362 71M+2 i
zm_roots.  Function         1 Root     20 =
      4.0937034781970755379675366902099562340 83M+2 + 0.0000000000000000000000000000000000000 00M 0 i

In fm_eigensystem inverse iteration did not converge for i =   1.
Error =  7.6502799E-33 was not less than tol =  1.0000000E-56


Increase precision and try again.

zm_roots.  Function         1 Root      1 =
     -2.0634576702827273394710217534643849357 93M+1 - 3.4246225668717590760883769599016964131 39M+1 i
zm_roots.  Function         1 Root      2 =
     -2.0634576702827273394710217534643849357 93M+1 + 3.4246225668717590760883769599016964131 39M+1 i
zm_roots.  Function         1 Root      3 =
      3.0560607409168638371404266945457157119 36M+1 + 8.3360535265719519314324122388720693426 82M+1 i
zm_roots.  Function         1 Root      4 =
      3.0560607409168638371404266945457157119 36M+1 - 8.3360535265719519314324122388720693426 82M+1 i
zm_roots.  Function         1 Root      5 =
     -6.7830167103210759594384380205392427940 73M+1 - 7.4625338768464899498098978613853439532 54M+1 i
zm_roots.  Function         1 Root      6 =
```

```
     -6.783016710321075959438438020539242794073M+1 + 7.462533876846489949809897861385343953254M+1 i
zm_roots.  Function         1 Root      7 =
      1.917506134471317207494265983075685674297M+2 + 2.702162066688715967796025667696818988508M+0 i
zm_roots.  Function         1 Root      8 =
      1.917506134471317207494265983075685674297M+2 - 2.702162066688715967796025667696818988508M+0 i
zm_roots.  Function         1 Root      9 =
      5.539287055262763052216673501217572896407M+1 - 1.481778482945263333150647111719042173911M+2 i
zm_roots.  Function         1 Root     10 =
      5.539287055262763052216673501217572896407M+1 + 1.481778482945263333150647111719042173911M+2 i
zm_roots.  Function         1 Root     11 =
     -1.291358012506813331147719074609996201322M+2 - 6.672366153489515693408095454622995352160M+1 i
zm_roots.  Function         1 Root     12 =
     -1.291358012506813331147719074609996201322M+2 + 6.672366153489515693408095454622995352160M+1 i
zm_roots.  Function         1 Root     13 =
      1.733044222015961071927087335380438262611M+1 + 1.896658842686711026868862416847018721275M+2 i
zm_roots.  Function         1 Root     14 =
      1.733044222015961071927087335380438262611M+1 - 1.896658842686711026868862416847018721275M+2 i
zm_roots.  Function         1 Root     15 =
      1.463918480314701729094519704621607149546M+2 - 1.147940770867415991803267869952663801160M+2 i
zm_roots.  Function         1 Root     16 =
      1.463918480314701729094519704621607149546M+2 + 1.147940770867415991803267869952663801160M+2 i
zm_roots.  Function         1 Root     17 =
     -2.898696304526468073522732195519567464547M+2 + 0.000000000000000000000000000000000000000M 0 i
zm_roots.  Function         1 Root     18 =
     -6.607619528736878039009416361465008831479M+1 + 2.213403239944865084309358862537281129109M+2 i
zm_roots.  Function         1 Root     19 =
     -6.607619528736878039009416361465008831479M+1 - 2.213403239944865084309358862537281129109M+2 i
zm_roots.  Function         1 Root     20 =
      4.093703478197075537967536690209956157580M+2 + 0.000000000000000000000000000000000000000M 0 i

Norm of the residual =    9.8004402E-51


 Time to solve the system:      2.85 seconds.

 The eigenvalues and eigenvectors are in file EigenSystem.out.
```